

IN THE SPECIFICATION

Please replace the paragraph beginning on page 8, line 4 with the following:

Fig. 1 shows a preferred embodiment of an apparatus according to the invention. The cryostat containing the cooling medium 14 consists of a central vessel 9 and two tubes 7. A conductor 1 including superconducting material is conveyed from a coil 10 into the cryostat 7,9 through a field generating device 2, out of the cryostat and recoiled 11. The apparatus also comprises a mechanical control device which is designed to assure that the conductor movement in vertical and horizontal directions is restricted and that the conductor is not exposed to bending radius smaller than a given value, e.g. 200 mm. The field generating device 2, for generating the external magnetic field is also called the magnet 2 hereinafter, may be constructed as a pair of Helmholtz coils. In the magnet 2 the field, B, is normal to the conductor surface and the field strength is advantageously high enough to obtain twice the field of full penetration for the actual superconductor. A first measurement means 6 for measuring the resulting magnetic field are placed above and below the tape (i.e. conductor) respectively. The measurement means 5,6 which are also called magnetic sensors 5,6 hereinafter, may e.g. be Hall probes, inductance coils, or superconducting circuits (squids).

Please replace the paragraph beginning on page 10 , line 7 with the following:

~~It is determined on~~ On the basis of the measurement means 12 for determining part of the resulting magnetic field and for determining the critical current determines which part of the resulting magnetic field is out of phase with the external magnetic field. The critical current is determined by means 12 on the basis thereof. It is note that the part of the measured magnetic field which is in phase and out of phase with the external field will be close to the shielding field and the remanent field respectively and are taken as the most important parameters describing the superconducting properties of the conductor 1.